CLAIMS

1. In a data communication system, a method for distributing time division multiplexed (TDM) data, the method comprising acts of:

receiving, from at least one TDM source, at least one timeslot associated with a TDM communication;

inserting the at least one received timeslot into a packet; and

transmitting the packet to a destination capable of recovering the at least one timeslot from the transmitted packet.

2. The method according to claim 1, wherein the method further comprises an act of receiving the packet, and forwarding the timeslot to at least one TDM destination, wherein the TDM source and TDM destination are located on at least one circuit board within a communication system.

3. The method according to claim 1, wherein the at least one TDM source is a TDM bus, and wherein the act of receiving further comprises receiving the at least one timeslot from the TDM bus.

4. The method according to claim 3, wherein the act of transmitting the packet further comprises an act of transmitting the packet to the destination over a packet-based network.

5. The method according to claim 4, wherein the packet-based network includes an Ethernet network.

6. The method according to claim 4, wherein the packet-based network transmits timeslot data over a full-duplex connection.

7. The method according to claim 5, wherein the shared media network includes at least one packet switch, and wherein the act of transmitting further comprises an act of forwarding the packet by the at least one packet switch toward the destination.

8. The method according to claim 7, wherein the act of forwarding includes an act of determining where to forward the packet based on Ethernet MAC header information only.

9. The method according to claim 5, wherein the packet-based network includes a point-to-point connection between an entity associated with the TDM source and an entity associated with the TDM destination, and wherein the act of transmitting further comprises an act of transmitting the packet over the point-to-point connection.

10. The method according to claim 4, wherein the TDM bus has an associated TDM frame period, and wherein a latency associated with transmitting the packet is less than a TDM frame period.

11. The method according to claim 10, further comprising an act of receiving the packet at the destination, wherein the act of receiving does not include the use of a jitter buffer at the destination.

12. The method according to claim 1, wherein the act of inserting the at least one received timeslot into a packet, includes an act of inserting the at least one timeslot into a payload section of the packet.

13. The method according to claim 1, wherein the packet includes data link information, and wherein the act of transmitting the packet further comprises an act of transmitting the packet based only on the data link information.

14. The method according to claim 1, wherein the act of transmitting further comprises an act of transmitting, in parallel, the packet to the destination over a plurality of redundant connections.

15. The method according to claim 13, wherein the act of transmitting the packet includes transmitting the packet substantially simultaneously over the plurality of redundant connections.

16. The method according to claim 1, wherein the act of transmitting further comprises an act of transmitting the packet in order compared to one or more other packets having one or more timeslots from the at least one TDM source.

17. The method according to claim 16, wherein the act of transmitting the packet further comprises an act of transmitting the packet to the destination over a packet-based network, and wherein the act of transmitting the packet further comprises transferring the packet and the one or more other packets to the destination in order.

18. The method according to claim 1, wherein the act of transmitting the packet further comprises an act of transmitting the packet to the destination over a packet-based network to another data communication system associated with the destination.

19. The method according to claim 1, further comprising an act of indicating, to the destination when data in the at least one timeslot has changed.

20. The method according to claim 1, further comprising an act of providing a synchronization signal to the at least one TDM source and to the destination.

21. The method according to claim 20, wherein the act of providing the synchronization signal includes an act of providing the synchronization signal via a network separate from a network over which the packet is transmitted.

22. A system for communicating TDM data comprising:

a first TDM communication entity that is adapted to receive at least one timeslot, the timeslot associated with a TDM connection; and

a second TDM communication entity coupled to the first TDM communication entity through a packet-based network, wherein the first TDM communication entity is adapted to transmit a packet to the second TDM communication entity through the packet-based network, the packet including the at least one timeslot.

23. The system according to claim 22, further comprising at least one packet switch that couples the first TDM communication entity to the second TDM communication entity, and

wherein the at least one packet switch is adapted to forward the packet to the second TDM communication entity.

24. The system according to claim 22, further comprising a synchronizer coupled to the first TDM communication entity and the second TDM communication entity, the synchronizer providing a synchronization signal to the first TDM communication entity and the second TDM communication entity.

25. The system according to claim 24, wherein the synchronizer is coupled to the first TDM communication entity and the second TDM communication entity separately from the packet-based network.

26. The system according to claim 25, wherein the synchronizer provides the synchronization signal to the first TDM communication entity and the second TDM communication entity over at least one connection, the at least one connection being separate from the packet-based network.

27. The system according to claim 22, wherein the latency associated with transmitting the packet to the second TDM communication entity is less than one TDM frame period, and wherein the second TDM communication entity does not implement a jitter buffer to receive one or more packets.